

WHAT IS CLAIMED IS:

1. A method of removing a medical article from skin, the method comprising:
  - 5 providing a medical article adhered to skin, wherein the medical article comprises a backing and a stretch removable pressure sensitive adhesive layer disposed thereon; and
  - stretching the medical article in an amount sufficient to delaminate the adhesive layer from the backing and remove the medical
  - 10 article from the skin.
2. The method of claim 1 wherein stretching the medical article comprises stretching it in a direction substantially parallel to the plane of the skin to which it is adhered.
- 15 3. The method of claim 1 wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension.
- 20 4. The method of claim 3 wherein the stretchability at break of the adhesive layer is at least about 300%.
5. The method of claim 4 wherein the stretchability at break of the adhesive layer is no greater than about 800%.
- 25 6. The method of claim 3 wherein the stretchability at break of the adhesive layer is at least about 10% greater than that of the backing.
7. The method of claim 1 wherein the adhesive layer comprises a
- 30 poly(meth)acrylate.

8. The method of claim 1 wherein the adhesive layer comprises a reinforced adhesive.
9. The method of claim 8 wherein the adhesive layer comprises a fibrous reinforcing material.
10. The method of claim 9 wherein the adhesive layer comprises:  
a pressure sensitive adhesive matrix; and  
a fibrous reinforcing material within the pressure sensitive adhesive matrix;  
wherein the adhesive layer has a yield strength and a tensile strength, and wherein the tensile strength is about 0.7 MPa or greater, and at least about 150% of the yield strength.
11. The method of claim 10 wherein the pressure sensitive adhesive matrix comprises a polymer derived from at least one alkyl ester monomer selected from isooctyl acrylate, 2-ethyl-hexyl acrylate, and n-butyl acrylate, and at least one co-monomer selected from acrylic acid and acrylamide.
12. The method of claim 1 wherein the adhesive layer comprises an A-B-A block copolymer.
13. The method of claim 1 wherein the medical article is in the form of a wound dressing, surgical dressing, medical tape, athletic tape, or surgical drape.
14. The method of claim 1 wherein the medical article is in the form of a sensor, an electrode, or an ostomy appliance.
15. A method of removing a medical article from skin, the method comprising:

providing a medical article adhered to skin, wherein the medical article comprises a backing and a stretch removable pressure sensitive adhesive layer disposed thereon;

5 wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension;

wherein the stretch removable pressure sensitive adhesive layer comprises:

10 a pressure sensitive adhesive matrix; and  
a fibrous reinforcing material within the pressure sensitive adhesive matrix;

and further wherein the adhesive layer has a yield strength and a tensile strength, and wherein the tensile strength is about 0.7 MPa or greater, and at least about 150% of the yield strength; and

15 stretching the medical article in an amount sufficient to delaminate the adhesive layer from the backing and remove the medical article from the skin.

20 16. A method of removing a medical article from skin, the method comprising:

providing a medical article adhered to skin, wherein the medical article comprises a backing and a stretch removable pressure sensitive adhesive layer disposed thereon;

25 wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension;

wherein the stretch removable pressure sensitive adhesive layer comprises:

30 a pressure sensitive adhesive matrix comprising a polymer derived from at least one alkyl ester monomer selected from isooctyl acrylate, 2-ethyl-hexyl acrylate,

and n-butyl acrylate; and at least one co-monomer  
selected from acrylic acid and acrylamide; and  
a fibrous reinforcing material within the pressure  
sensitive adhesive matrix;  
5 and further wherein the adhesive layer has a yield  
strength and a tensile strength, and wherein the tensile strength is  
about 0.7 MPa or greater, and at least about 150% of the yield  
strength; and  
stretching the medical article in a direction relative to the skin to  
10 which it is adhered sufficient to delaminate the adhesive layer from the  
backing and remove the medical article from the skin.

17. A medical article comprising a backing and a stretch removable pressure  
sensitive adhesive layer disposed thereon, wherein the backing and the  
15 adhesive layer are selected such that the stretchability of the adhesive  
layer is greater than that of the backing under the same tension and the  
adhesive layer and backing delaminate when removed from skin.

18. The medical article of claim 17 wherein the stretchability at break of the  
20 adhesive layer is at least about 300%.

19. The medical article of claim 17 wherein the stretchability at break of the  
adhesive layer is at least about 10% greater than that of the backing.

20. The medical article of claim 17 wherein the adhesive layer and backing  
25 form separate phases.

21. The medical article of claim 17 wherein the adhesive layer comprises a  
poly(meth)acrylate.  
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22. The medical article of claim 17 wherein the adhesive layer comprises a  
fibrous reinforcing material.

23. The medical article of claim 22 wherein the adhesive layer comprises:  
a pressure sensitive adhesive matrix; and  
a fibrous reinforcing material within the pressure sensitive  
5 adhesive matrix;  
wherein the adhesive layer has a yield strength and a tensile  
strength, and wherein the tensile strength is about 0.7 MPa or greater,  
and at least about 150% of the yield strength.
- 10 24. The medical article of claim 23 wherein the pressure sensitive adhesive  
matrix comprises a polymer derived from at least one alkyl ester  
monomer selected from isooctyl acrylate, 2-ethyl-hexyl acrylate, and n-  
butyl acrylate, and at least one co-monomer selected from acrylic acid  
and acrylamide.
- 15 25. The medical article of claim 17 wherein the adhesive layer comprises an  
A-B-A block copolymer.
- 20 26. The medical article of claim 17 wherein the backing comprises melt  
blown fibers.
27. The medical article of claim 17 which is in the form of a wound  
dressing, surgical dressing, medical tape, athletic tape, or surgical drape.
- 25 28. The medical article of claim 17 which is in the form of a sensor, an  
electrode, or an ostomy appliance.
29. A method of making a medical article, the method comprising:  
providing a backing;  
30 selecting a stretch removable pressure sensitive adhesive layer  
such that the stretchability of the adhesive layer disposed on the backing  
is greater than that of the backing under the same tension; and

laminating the backing and the pressure sensitive adhesive layer together under conditions of temperature and pressure that allow the adhesive layer and backing to delaminate when removed from skin.

- 5     30.     A stretch removable adhesive article comprising a backing with a predefined tab and a pressure sensitive adhesive layer disposed on a major surface of the backing opposite that of the tab, wherein the predefined tab is located in a central portion of the backing.
- 10    31.     The article of claim 30 wherein the pressure sensitive adhesive is a stretch removable pressure sensitive adhesive.
- 15    32.     The article of claim 30 wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension.
33.     The article of claim 32 wherein the stretchability at break of the adhesive layer is at least about 300%.
- 20    34.     The article of claim 32 wherein the stretchability at break of the adhesive layer is no greater than about 800%.
35.     The article of claim 32 wherein the stretchability at break of the adhesive layer is at least about 10% greater than that of the backing.
- 25    36.     The article of claim 30 wherein the adhesive layer comprises a poly(meth)acrylate.
37.     The article of claim 30 wherein the adhesive layer comprises a reinforced adhesive.
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38. The article of claim 37 wherein the adhesive layer comprises a fibrous reinforcing material.
39. The article of claim 38 wherein the adhesive layer comprises:  
5                   a pressure sensitive adhesive matrix; and  
                  a fibrous reinforcing material within the pressure sensitive adhesive matrix;  
                  wherein the adhesive layer has a yield strength and a tensile strength, and wherein the tensile strength is about 0.7 MPa or greater,  
10               and at least about 150% of the yield strength.
40. The article of claim 39 wherein the pressure sensitive adhesive matrix comprises a polymer derived from at least one alkyl ester monomer selected from isooctyl acrylate, 2-ethyl-hexyl acrylate, and n-butyl  
15               acrylate, and at least one co-monomer selected from acrylic acid and acrylamide.
41. The article of claim 30 wherein the adhesive layer comprises an A-B-A block copolymer.  
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42. The article of claim 30 wherein the tab comprises a portion of the backing and portion of the adhesive layer.
43. The article of claim 30 wherein the backing comprises two pieces.  
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44. The article of claim 43 wherein the two backing pieces overlap.
45. The article of claim 43 wherein each backing piece comprises an end free of exposed adhesive, and further wherein the ends free of exposed  
30               adhesive form the predefined tabs.
46. The article of claim 30 which is a medical article.

47. The article of claim 46 which is in the form of a wound dressing, surgical dressing, medical tape, athletic tape, or surgical drape.
- 5 48. The article of claim 46 which is in the form of a sensor, an electrode, or an ostomy appliance.
49. A stretch removable adhesive article comprising a backing with a predefined tab and a stretch removable pressure sensitive adhesive layer  
10 disposed thereon, wherein the predefined tab is located in a central portion of the backing, and further wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension.
- 15 50. A stretch removable adhesive article comprising a backing with a predefined tab and a stretch removable pressure sensitive adhesive layer disposed thereon, wherein:
- the predefined tab is located in a central portion of the backing;
- the backing and the adhesive layer are selected such that the  
20 stretchability of the adhesive layer is greater than that of the backing under the same tension; and
- the adhesive layer comprises:
- a pressure sensitive adhesive matrix; and
- a fibrous reinforcing material within the pressure  
25 sensitive adhesive matrix;
- wherein the adhesive layer has a yield strength and a tensile strength, and wherein the tensile strength is about 0.7 MPa or greater, and at least about 150% of the yield strength.
- 30 51. A method of removing an article from a surface, the method comprising:
- providing a stretch removable adhesive article adhered to a surface, wherein the article comprises a backing with a predefined tab



and a pressure sensitive adhesive layer disposed thereon, wherein the predefined tab is located in a central portion of the backing; and

pulling on the tab to stretch the adhesive article in an amount sufficient to remove the article from the surface.

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52. The method of claim 51 wherein the pressure sensitive adhesive is a stretch removable pressure sensitive adhesive.

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53. The method of claim 51 wherein the backing and the adhesive layer are selected such that the stretchability of the adhesive layer is greater than that of the backing under the same tension.

54. The method of claim 53 wherein the stretchability at break of the adhesive layer is at least about 300%.

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55. The method of claim 53 wherein the stretchability at break of the adhesive layer is at least about 10% greater than that of the backing.

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56. The method of claim 51 wherein the adhesive layer comprises a poly(meth)acrylate.

57. The method of claim 51 wherein the adhesive layer comprises a reinforced adhesive.

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58. The method of claim 57 wherein the adhesive layer comprises:  
a pressure sensitive adhesive matrix; and  
a fibrous reinforcing material within the pressure sensitive adhesive matrix;

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wherein the adhesive layer has a yield strength and a tensile strength, and wherein the tensile strength is about 0.7 MPa or greater, and at least about 150% of the yield strength.

59. The method of claim 58 wherein the pressure sensitive adhesive matrix comprises a polymer derived from at least one alkyl ester monomer selected from isooctyl acrylate, 2-ethyl-hexyl acrylate, and n-butyl acrylate, and at least one co-monomer selected from acrylic acid and acrylamide.
60. The method of claim 51 wherein the adhesive layer comprises an A-B-A block copolymer.
61. The method of claim 51 wherein the tab comprises a portion of the backing and portion of the adhesive layer.
62. The method of claim 51 wherein the backing comprises two pieces.
63. The method of claim 62 wherein the two backing pieces overlap.
64. The method of claim 62 wherein each backing piece comprises an end free of exposed adhesive, and further wherein the ends free of exposed adhesive form the predefined tabs.
65. The method of claim 51 wherein the article is a medical article.
66. The method of claim 65 wherein the medical article is in the form of a wound dressing, surgical dressing, medical tape, athletic tape, or surgical drape.
67. The method of claim 65 wherein the medical article is in the form of a sensor, an electrode, or an ostomy appliance.
68. A method of making a medical article, the method comprising:  
providing a backing with a predefined tab located in a central portion of the backing; and

applying a stretch removable pressure sensitive adhesive to a major surface of the backing opposite that of the predefined tab.

69. A method of removing an article from a surface, the method comprising:  
5           providing a stretch removable adhesive article adhered to a surface, wherein the article comprises a backing with a predefined tab and a pressure sensitive adhesive layer disposed thereon, wherein the predefined tab is located in a central portion of the backing; and  
             pulling on the tab along a direction that is normal to the surface  
10          to stretch the adhesive article in an amount sufficient to remove the article from the surface.
70. A method of removing an article from a surface, the method comprising:  
             providing a stretch removable adhesive article adhered to a  
15          surface, wherein the article comprises a backing and a pressure sensitive adhesive layer disposed thereon; and  
             pulling on the article along a direction that is not normal to the surface to stretch the adhesive article in an amount sufficient to remove the article from the surface.  
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71. The method of claim 70 wherein the direction forms an angle of about 20 degrees or more off of normal.
72. The method of claim 70 wherein the backing comprises a predefined tab  
25          and pulling on the article comprises pulling on the predefined tab.
73. The method of claim 72 wherein the predefined tab is located in a central portion of the backing
- 30   74. The method of claim 70 wherein the article is rotated to a nearly perpendicular orientation from its starting position.